

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### QCAP

#### New Hampshire Manufacturing Extension Partnership

#### Quality Castings and Aluminum Products LLC Forges Ahead with Lean Improvements!

##### Client Profile:

Quality Castings and Aluminum Products LLC (QCAP) is a foundry specializing in high quality sand casting of aluminum, zinc alloys and bronze. They provide products to a wide variety of industries such as aerospace, automotive, power tool, packaging, food service, fire protection, medical and marine. The facility is located in West Franklin, New Hampshire and employs 10 people.

##### Situation:

When Chris and Debbi Leuteritz purchased QCAP, it was evident that they would need a continuous improvement strategy. The facility was cluttered and the layout chaotic. "Nobody had ever taken the time to sit down and figure out how to organize things or the most efficient way to do things, said Chris. "No one seemed to recognize the value in simply putting something back where you found it. So much time and energy was being wasted walking back and forth to get materials or tools or looking around to find things." Previous experiences with what others had deemed as 'Lean' also proved to be a real roadblock when Chris first mentioned the term. The employees had many misconceptions and feared that Lean meant job losses. "We had to start from scratch teaching about what Lean wasn't and what the process is all about," said Chris. The Leuteritz's recognized that improving efficiency and implementing Lean tools was necessary if they hoped to compete for larger government contracts. They also felt that Lean concepts should catch on at QCAP because of the emphasis on simple, low cost or no cost solutions. The approach depends on worker involvement and the team would be integral in making these changes. Chris contacted Jane T. Ely of the New Hampshire Manufacturing Extension Partnership (NH MEP), a NIST MEP network affiliate, to assist them with their strategy and deployment.

##### Solution:

NH MEP facilitated a Lean TW102, the Principles of Lean Manufacturing for Job Shops, event for several company employees. This workshop is used to familiarize participants with Lean terms and tools through a combination of classroom and hands on simulation work. Ely took several QCAP employees through a Value Stream Mapping (VSM) exercise where they 'mapped out' a process or 'value stream' as it currently exists. Then they determined what changes had to be made and what wastes needed to be removed in order to get to the ideal future state for the process. The wastes were addressed by the teams during subsequent Kaizen events through activities like posting signs, relocating materials, shadow boards, layout changes and cleaning and organizing.

In one instance, a technician was walking about 600 feet several times a day during a set up to get what he needed. QCAP is a job shop so this type of wasted motion ends up being very costly in time and productivity. Simple changes in layout, materials and tools significantly reduced the distance traveled and the associated waste of the technician's time. In another situation, a second chemical cabinet was added in order to eliminate the need to run back and forth to the other end of the building. The QCAP employees divided into teams and tackled areas in the shop to clean and reorganize. "The

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hallway between molding and grinding has three level shelving running the length of one wall," explained Chris. "We reorganized the shelves, tossed out junk, moved things that are used for molding toward that end of the shelving and those things used in the grinding room toward the other end. This freed up lots of space and greatly reduced travel and time wasted looking for things." Five feet of cleared shelving now holds an air tank for a new variable speed compressor that supplies a steady and consistent supply of air for their mold room processes.

QCAP teams used 5S (Sort, Set in Order, Shine, Standardize, Sustain) Kaizen methodology to reorganize a small set up area which was cluttered, confusing and hazardous to maneuver. The team divided the area into two parts and color coded tools and organized everything so that it is neat and clean and items can be easily located. Standards were established and a manager assigned for the area. Cleaning checklists, weekly audits and regular meetings have helped monitor the success of the work throughout the facility. The team is now in the habit of returning things and cleaning up after themselves. These regular activities became key in sustaining the positive results. Chris said, "The 5S activities are being maintained and that 92 checklist score dropped to a 32 -- an impressive 65 percent improvement.

#### **Results:**

- \* Retained \$25,000 in sales.
- \* Increased sales by \$20,000.
- \* Realized \$8,000 in cost savings.

#### **Testimonial:**

"Working with the NH MEP was a fantastic experience. Everyone has embraced the training and sees its value. The format that NH MEP used was right up their alley enabling them to rapidly grasp the concepts and apply them back here. The Kaizen and 5S have had similar impacts to our operation."

Co-owner and Manager, Chris Leuteritz